

## NOMENCLATURAL NOTES

### On the nomenclature of the genus name *Ululodes* (Neuroptera, ASCALAPHIDAE)

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**Abstract.** *Ascalaphus macleayanus* Guilding, 1823 is fixed as the type species of the Western Hemisphere owlfly genus *Ululodes* Smith, 1900 (ASCALAPHIDAE). Information clarifying the proper authorship, date of publication and nomenclatural gender of this name is presented.

**Keywords.** Nomenclature, ASCALAPHIDAE, *Ululodes macleayanus*, owlflies, Nearctic, Neotropical.

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### Introduction

*Ululodes* Smith, 1900 is the most speciose genus of owlflies (Neuroptera, ASCALAPHIDAE) in the Western Hemisphere, currently containing approximately 25 valid extant species. Of these, several occur commonly in the warm temperate parts of the United States. The precise number of species that occur north of the Mexican border, however, has never been known with certainty, and several aspects of the nomenclature of the genus have also remained unclear up to the present time. In anticipation of a general review of the north American species of *Ululodes*, currently in progress, we take this opportunity to address and resolve a number of nomenclatural issues that are outstanding with respect to the genus name *Ululodes*. We present below a concise synonymical listing for the genus, followed by a discussion of several specific nomenclatural issues. Citations in the form ‘Article 00’ refer to articles in the 4th edition of the Code.

### Genus *Ululodes* Smith, 1900

*Ulula* Rambur, 1842, p. 357. Type species: *Ascalaphus senex* Burmeister, 1839 (currently treated as a junior subjective synonym of *Ascalaphus macleayanus* Guilding, 1823, see Penny et al., 1997), by subsequent designation of Blanchard in d’Orbigny (1849, p. 756). Etymology: unexplained, probably from Latin *ulula* [fem.], a screech owl, in allusion to the owl-form of the minor spirit Ascalaphus in Greek mythology and to the taxonomic affinities of *Ulula* with the genus *Ascalaphus*, or perhaps in reference to the large eyes shared by owls and owlflies. Gender: feminine, from the gender of the Latin noun *ulula*, Article 30.1.1. Notes: a junior primary homonym of *Ulula* Cuvier, 1817, p. 329 (in Aves).

*Ululodes* Smith, 1900, p. 57. Type species: *Ascalaphus macleayanus* Guilding, 1823 [currently valid as *Ululodes macleayanus*, the taxonomic species actually involved

in the originally-included nominal species misidentified by Smith as '*U. hyalinus* Latr.' (= *Ascalaphus hyalinus* Latreille in Humboldt & Bonpland, 1817), by designation herein under Article 70.3.2 (see discussion below)]. Incorrect type species designation by Navás [1912, p. 70 (p. 26 of separate)] of *Ascalaphus macleayanus* Guilding, 1823, a name not originally included in *Ululodes* and not linked by Navás with one of the originally included names. Etymology: unexplained, probably Ulul- (from *Ulula* Rambur, an ascalaphid genus-group name) + -odes (from Gr. -odes, like or resembling), in reference to the ascalaphid taxonomic affinities of its originally included species, or perhaps in reference to the junior homonym *Ulula* Rambur, for which *Ululodes* may have been intended as an objective replacement name (see discussion below). Gender: masculine under Article 30.1.4.4, confirmed by the original combinations *Ululodes hyalinus* and *Ululodes 4-punctatus* (see discussion below).

**Authorship.** Authorship of *Ululodes* has been variously attributed in the literature to either Currie (e.g. van der Weele, 1909; Navás, 1912; Neave, 1940; Shetlar, 1977; Penny, 1982a) or Currie in Smith (e.g. Oswald & Penny, 1991, Penny et al., 1997, Penny, 2002). Unfortunately, neither of these authorship attributions appears to be compliant with Article 50, which treats the authorship of scientific names. Smith, not Currie, was responsible for publication of the name *Ululodes*. Attribution of authorship to Currie under Article 50.1.1 (and consequent citation of authorship as 'Currie in Smith' under Recommendation 51E) would require demonstration that Currie alone was responsible for both the name and for satisfying all of the criteria of availability other than publication. While it seems reasonable to assume that Smith received the name *Ululodes* from Currie—based on Smith's explicit (1900) attribution of authorship to Currie—Currie does not appear to be responsible for fulfilling all of the non-publication criteria of availability. Smith (1890, p. 462), in his first catalogue of the insect fauna of the state of New Jersey (U.S.A.), had already noted that the two species that were later originally included in *Ululodes* occurred in that state (but in that work they were listed in the genus *Ascalaphus*). This observation provides strong evidence that the list of species originally included in *Ululodes* in 1900 was provided by Smith (based on his previous catalogue), not by Currie, and thus, that Currie did not provide to Smith the list of species that were originally included in *Ululodes*, and which provide the indication that contributes to the availability of *Ululodes* under Article 12.2.5. Furthermore, in his 1900 work (see pp. 54, 721), Smith explicitly acknowledged Banks (i.e. Nathan Banks [1868–1953], American entomologist), and not Currie (i.e. Rolla Patterson Currie [1875–1960], American entomologist) for providing assistance with identifications and taxonomic structure for the Neuroptera parts of the work. In his catalogue of the neuropteroid insects of temperate North America, published a few years earlier, Banks (1892, p. 361; undoubtedly following the taxonomy of McLachlan 1871, pp. 246–247) had included in *Ulula* the same two species that were placed in that genus by Smith (1900). Based on this assessment, authorship of *Ululodes* must be attributed under Article 50.1 solely to Smith, not to Currie or 'Currie in Smith'.

**Year of Publication.** Smith (1900) was issued as a supplement to the 27th annual report of the New Jersey State Board of Agriculture, covering the calendar year 1899.

The title page of this work bears both the report year, 1899, and a separate year of publication, 1900. Names and nomenclatural acts made available in this work therefore date from 1900.

**Type Species.** It has sometimes been assumed (e.g. Neave, 1940) that the name *Ululodes* was proposed as a nomen novum for *Ulula* Rambur, 1842. This interpretation has seemed plausible given the etymology of *Ululodes* ('*Ulula*-like') and its original appearance in print without any form of description or diagnosis (much like the proposal of many historical nomina nova). If *Ululodes* was proposed as a nomen novum, its type species would be fixed automatically under Article 67.8 as the type species of *Ulula*. It might be argued that Smith's use of *Ululodes* constituted a nomen novum based on the reasoning that its use as a replacement name is a reasonable inference that could be drawn from the observation that the same two species that were included by Banks (1892) in *Ulula*, were subsequently included by Smith (1900) in *Ululodes*. We find, however, that *Ululodes* was not 'proposed expressly' to replace *Ulula*, and therefore fails the Code's Glossary definition of a new replacement name (nomen novum). The name *Ulula* is, in fact, not mentioned or cited anywhere in the work that contains the original publication of *Ululodes*; so, any conclusion that the name *Ululodes* was intended to replace *Ulula* must rest only on inference, not express statement. Thus, *Ululodes* must be considered to have been proposed as an independent genus name, with its type species to be fixed separately in accordance with the relevant articles of the Code.

Smith (1900) originally included two nominal species in *Ululodes*: (1) *Ascalaphus hyalinus* Latreille in Humboldt & Bonpland, 1817, as '*U. hyalinus* Latr.' [now considered to be a junior subjective synonym of *Ululodes cajennensis* (Fabricius, 1787)]; and (2) *Ascalaphus quadripunctatus* Burmeister, 1839, as '*U. 4-punctatus* Burm.' [now treated as the valid species *Ululodes quadripunctatus* (Burmeister)]. Neither species was fixed in the original publication as the type species of *Ululodes*, and both specific names are available and potential species for type fixation. No valid type species designations are known for *Ululodes*. Van der Weele (1908, p. 97), in the first revision of *Ululodes*, did not designate a type species, stating only 'Die Arten zerfallen in verschiedene Gruppen, von welchen die *macleayana* Gruppe die typische ist.' (= 'The species [of *Ululodes*] can be broken into various groups, of which the *macleayana* group is the typical one.'). This statement refers to a species group, so does not constitute an attempted type-species designation. Navás' (1912, p. 70 [p. 26 of separate]) explicit citation of *Ascalaphus macleayanus* Guilding (as 'Tipo. *U. macleayana* Guild.') as the type species of *Ululodes* is invalid as a type species designation because: (1) *macleayanus* was not a nominal species that was originally included in *Ululodes*, and (2) Navás did not link the name *macleayanus* to one of the two originally-included species in a manner that would satisfy Article 69.2.2. In the 110+ years since the publication of Smith's 1900 listing of New Jersey insects, only two *Ululodes* species—*Ululodes quadripunctatus* (Burmeister) and *Ululodes macleayanus* (Guilding)—have been documented as occurring in the state of New Jersey, an area that is known to lie close to the northeastern limit of the distribution of *Ululodes* in North America. Only one other *Ululodes* species—*Ululodes floridanus* (Banks, 1906)—is known to occur in the United States east of the Mississippi River, but only as far north as south-central North Carolina (ca. 400–500 km SW of

southernmost New Jersey). *Ululodes cajennensis* (Fabricius), the currently-valid name for *Ascalaphus hyalinus* Latreille in Humboldt & Bonpland, 1817 is widespread in Central and South America, and has been reported from the West Indies, but is not known to occur in the continental United States. Based on these distribution data, and because *Ululodes quadripunctatus* (Burmeister) is a well-known and distinctly separate species, we interpret the ‘*U. hyalinus* Latr.’ of Smith (1900) to represent a misidentification of *Ululodes macleayanus*.

To establish the type species of *Ululodes* in a manner that we judge to best serve the stability and universality of this genus name, and in a manner that is consistent with current and historical usage, we hereby designate as its type species the originally-included nominal species *Ascalaphus hyalinus* Latreille in Humboldt & Bonpland (1817). Furthermore, noting Smith’s original misidentification of *hyalinus*, we fix under Article 70.3.2 the taxonomic species actually involved in Smith’s misidentification, *Ascalaphus macleayanus* Guilding, 1823, to be the type species of *Ululodes*.

**Nomenclatural Gender.** The gender of the name *Ululodes* is masculine under Article 30.1.4.4, which explicitly addresses the gender of genus-group names ending in the suffix -odes. In the publication in which *Ululodes* was made available (Smith, 1900), the specific names of both of the species that were originally included in the genus are both based on Latin adjectives and are both cited in masculine form: (1) ‘hyalinus’ [from Latin adj. *hyalinus*, -a, -um: glassy], and (2) ‘4-punctatus’ [ending in Latin adj. *punctatus*, -a, -um: spotted (from Latin noun *punctum* [neut.], a point or dot + -atus, -a, -um: an adjective-forming suffix)]. Thus, there is no ambiguity as to the proper nomenclatural gender of *Ululodes* under the Code, and specific names based on Latin adjectives or participles should be written in their masculine forms when combined with *Ululodes* (Article 34.2).

Both recent and older usage is varied with respect to the nomenclatural gender accorded to *Ululodes* (as inferred from the endings used on combined species-group names): some works use only masculine endings (e.g. Smith, 1900; Shetlar, 1977; Penny, 2002; Oswald, 2007), some use only feminine endings (e.g. Banks, 1907; van der Weele, 1908; Smith, 1909; Navás, 1912; Penny, 1981b), and some use a mix of both (e.g. Penny et al., 1997). Historically, the treatment of *Ululodes* as feminine was probably strongly affected by the prominent and influential works of Banks (1907, an important catalogue of North American Neuroptera) and van der Weele (1908, an important world monograph of the ASCALAPHIDAE, and the first work to revise a group of species under the genus name *Ululodes*). Both of these works appeared within a few years after the original publication of *Ululodes*, and both treated the genus as feminine (possibly as a simple continuation based on the feminine gender of *Ulula*). While those treatments may have been acceptable for their time, the subsequent maturation of the International Code of Zoological Nomenclature (e.g. the gender treatment of the ending ‘-odes’) now requires that *Ululodes* be treated as masculine. By emphasizing this point here we hope to facilitate the stabilization of *Ululodes* combinations in their Code-compliant masculine forms. Based on the interpretations above, the record for the name *Ululodes* in the Nomenclator Zoologicus (Neave, 1940, p. 609) as ‘*Ululodes* (n. n.

pro *Ulula* Rambur, 1842) Currie 1899 ...' is incorrect with respect to its cited author and date of publication, and in stating that the name is a nomen novum.

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